

# Module 2 – Project Development and Environment

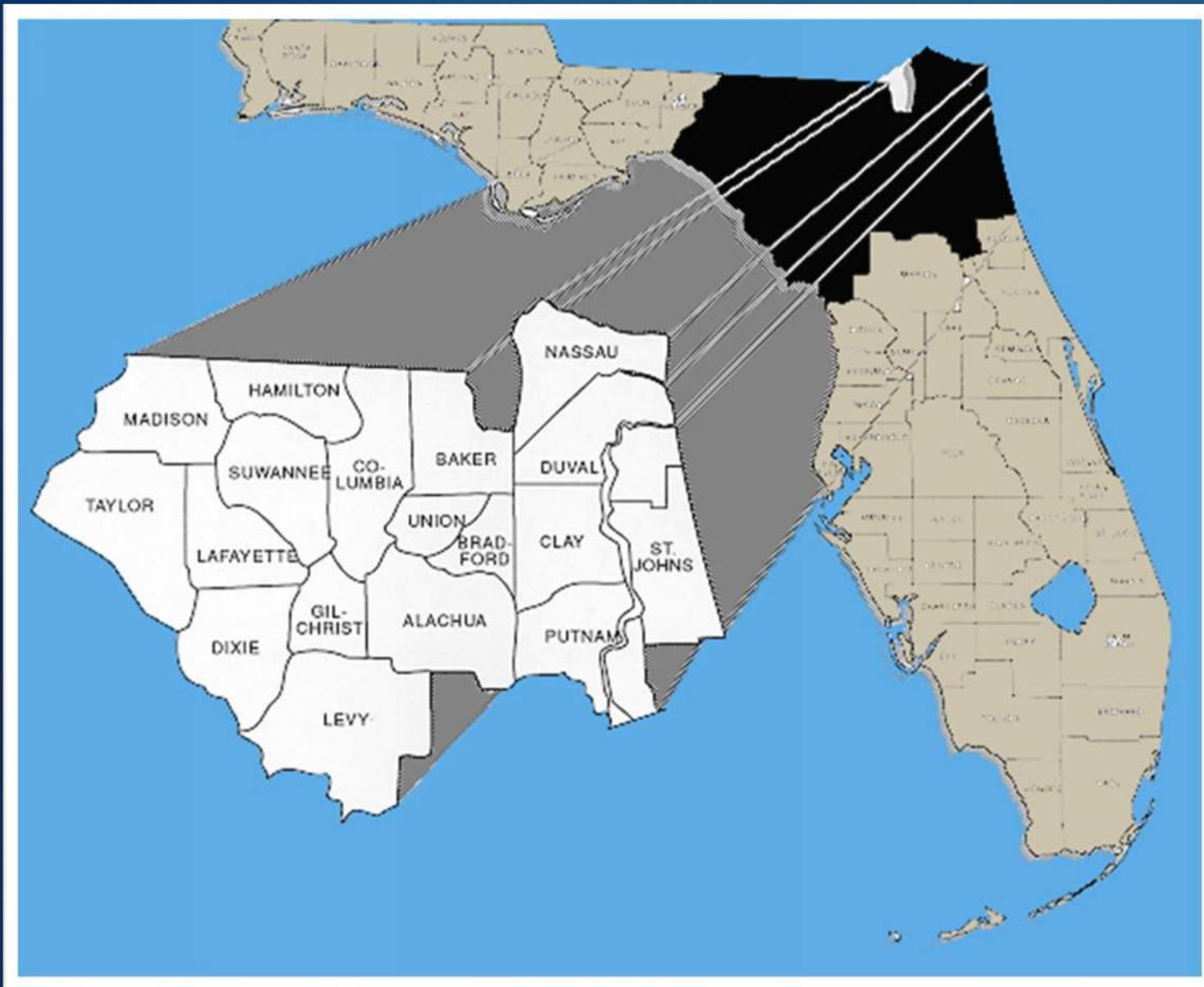
MARCH 1, 2021





# Agenda

- ▶ FDOT District 2 Background
- ▶ PD&E Public Involvement and Engineering Staff
- ▶ Production Process
- ▶ NEPA Background
- ▶ PD&E Process
- ▶ Contracts, Scopes and Schedules
- ▶ Typical District 2 projects



# FDOT District 2



# District 2

## Engineering and Public Involvement Staff



Janice Charles  
Public Involvement Coordinator



Michael Brock, P.E.  
Project Development Manager



Van Humphreys  
Permits Coordinator



Justin Garland, P.E.  
Project Development Engineer



Debbie Miller  
Scenic Highway Coordinator



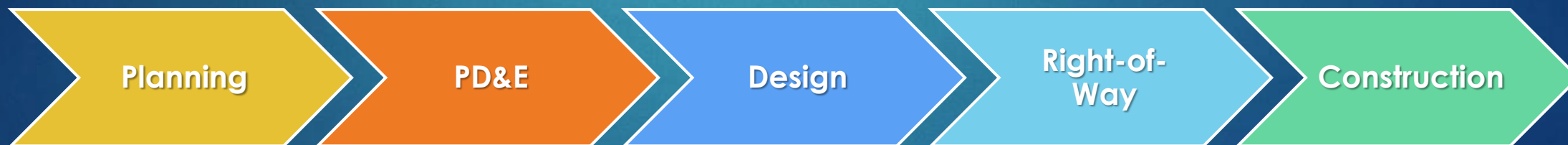
Tyler Klemm, P.E.  
Project Development Engineer



Brittany Chastain  
Project Development Specialist

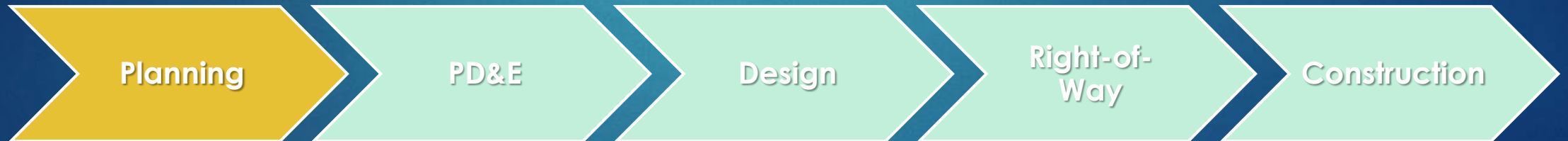
# Production Process

- ▶ Planning
- ▶ Project Development & Environment (PD&E)
- ▶ Design
- ▶ Right-of-Way
- ▶ Construction



# Production Process - Planning

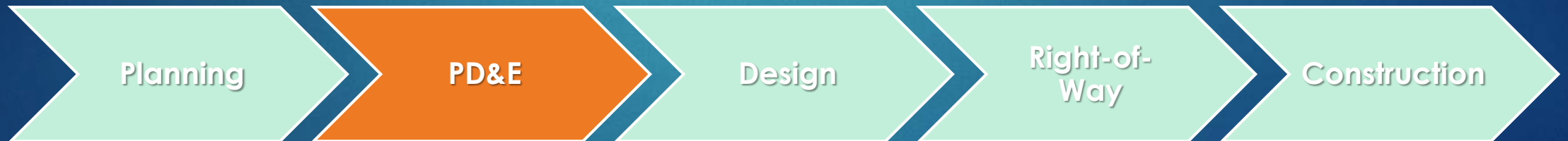
- ▶ Planning
  - ▶ Potential Projects
  - ▶ Planning Studies
  - ▶ Work Program Development
  - ▶ Existing Conditions
- ▶ ETDM Process
  - ▶ LRTP, TIP, STIP
  - ▶ Purpose and Need



# Production Process – PD&E

## ► PD&E

- Purpose and Need
- Alternative Development
- National Environmental Policy Act (NEPA) of 1969
- Environmental Studies
- Planning Consistency
- SWAT Process
- Environmental Document Approval

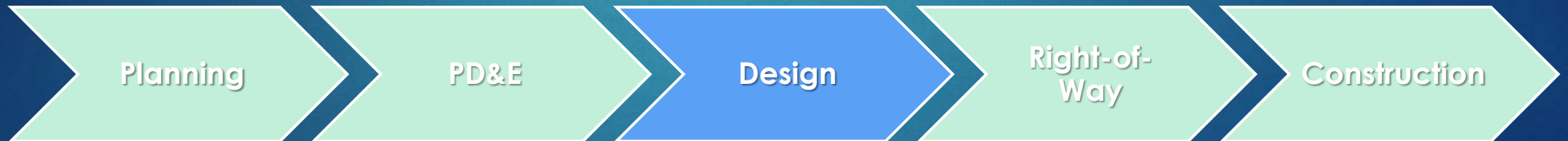




# Production Process - Design

## ► Design

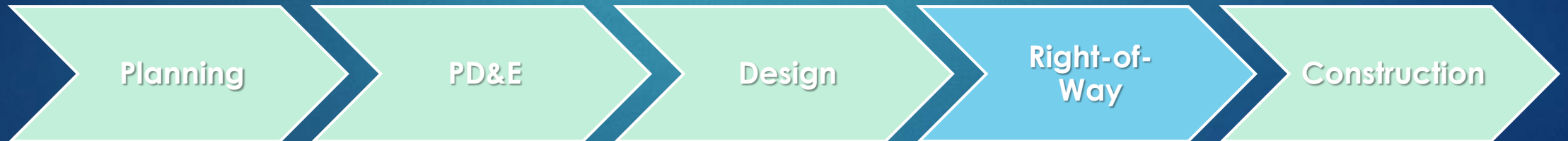
- Overlaps with other phases (SWAT process)
  - NEPA Approval before 60%
- Detailed Construction Plans
- Cost Estimates based upon quantities
- Utility Coordination
- Permits acquired





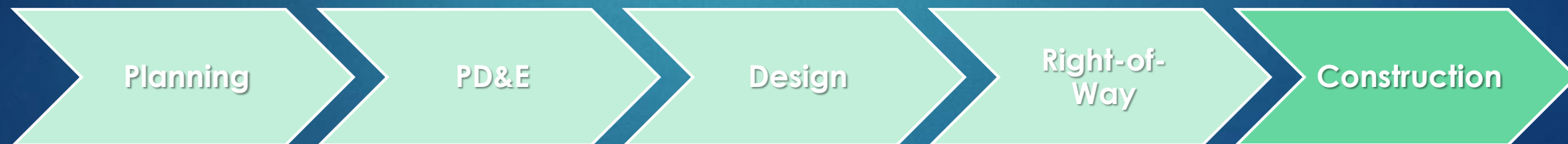
# Production Process – Right-of-Way

- ▶ Right-of-Way
  - ▶ Requires Environmental approval
  - ▶ Can be identified as early as PD&E
  - ▶ Typically occurs concurrent to or just after Design
  - ▶ Usually takes 2 years to process acquisitions.



# Production Process - Construction

- ▶ Construction
  - ▶ Multiple delivery methods
  - ▶ Conventional/Design Bid Build
  - ▶ Design-Build



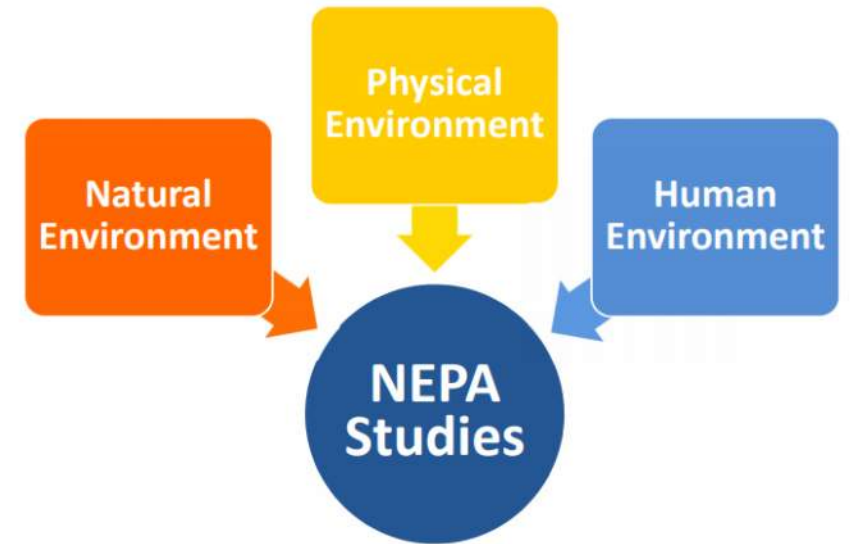
# NEPA Assignment

## ► What is NEPA?

- National Environmental Policy Act (NEPA) of 1969
- Federal environmental program administered by the U.S. Department of Transportation
- Outlines national environmental policy

## ► What is NEPA Assignment?

- Title 23 U.S.C § 327 "NEPA Assignment"
- Authorizes the Secretary of the US DOT to assign to the States responsibility for NEPA, environmental review, and other actions required by Federal Law
- Florida Department of Transportation received NEPA Assignment December 14, 2016





# PD&E Process

- ▶ Class of Action
- ▶ Project Description, Purpose and Need
- ▶ Alternative Analysis
- ▶ Identify and Address environmental issues
- ▶ Prepare technical studies and reports
- ▶ Public Involvement
- ▶ Approval with Location and Design Concept Acceptance (LDCA) or District Approval



**CR 210 and US 1 Interchange**  
**Project Development and Environment (PD&E) Study**  
*Financial Project ID No. 230420-7-22-01*  
*St. Johns County*

**Alternatives Evaluation Matrix**  
*Summary of Project Costs and Impacts*

EVALUATION FACTORS	CONCEPT A	CONCEPT B	NO BUILD
<b>Travel Service</b>			
US 1 - New Signalized Intersection	2	1	0
CR 210 - New Signalized Intersection	NONE	1	0
US 1 Thru Movement - (Annual LOS - Travel Time) - Northbound	E - 2 min	D - 0.9 Min	P-3.2 Min
US 1 Thru Movement - (Annual LOS - Travel Time) - Southbound	C - 1.8 Min	A - 0.9 Min	D - 3.8 Min
CR 210 Thru Movement - (Annual LOS - Travel Time) - Westbound	N/A	B - 1.4 Min	F-3.8 Min
CR 210 Thru Movement - (Annual LOS - Travel Time) - Eastbound	N/A	C - 2.0 Min	P-3.9 Min
<b>Socio-Cultural Impacts</b>			
Total Number of Properties Displaced	18	14	
Total Acres of Property Required	19.89 Acres	43.72 Acres	
Potential Relocation	B - Residential	B - Residential	
Unimproved Sites	4	5	
Site Specific for National Register of Historic Places	None	None	No Impacts
<b>Natural Environment Impacts</b>			
Wetlands Impacted (acres)	6.31 Acres	7.17 Acres	None
Threatened and Endangered Species	Minimal	Minimal	Not Impacted
<b>Physical Environment Impacts</b>			
Potential Contamination Site Impacts	3 Potential Sites / No Effect	3 Potential Sites / No Effect	No Impacts
Potential Air Quality or Noise Impacts	No Adverse Effects Anticipated	No Adverse Effects Anticipated	No Change
<b>Project Cost (\$ Millions)</b>			
Final Design & CE	9.41	11.02	None
Right-of-Way Acquisition	21.06	17.72	None
Project Construction	52.27	61.20	None
	1.83	0.72	None
	13.37	\$90.65	\$0.00

Construction cost.  
 Total initial maintenance of traffic costs.

## Proposed Typical Sections





# Class of Action - Federal

- ▶ **Federal Projects that don't require a PD&E Study:**

**Type 1  
Categorical  
Exclusion (CE)**

# Class of Action - Federal

## ► Federal Projects that require a PD&E Study:

**Type 2  
Categorical  
Exclusion (CE)**

**Environmental  
Assessment  
(EA)**

**Environmental  
Impact  
Statement (EIS)**

# Type 2 Categorical Exclusion (CE)



**PROJECTS WITH NO KNOWN  
SIGNIFICANT IMPACTS**



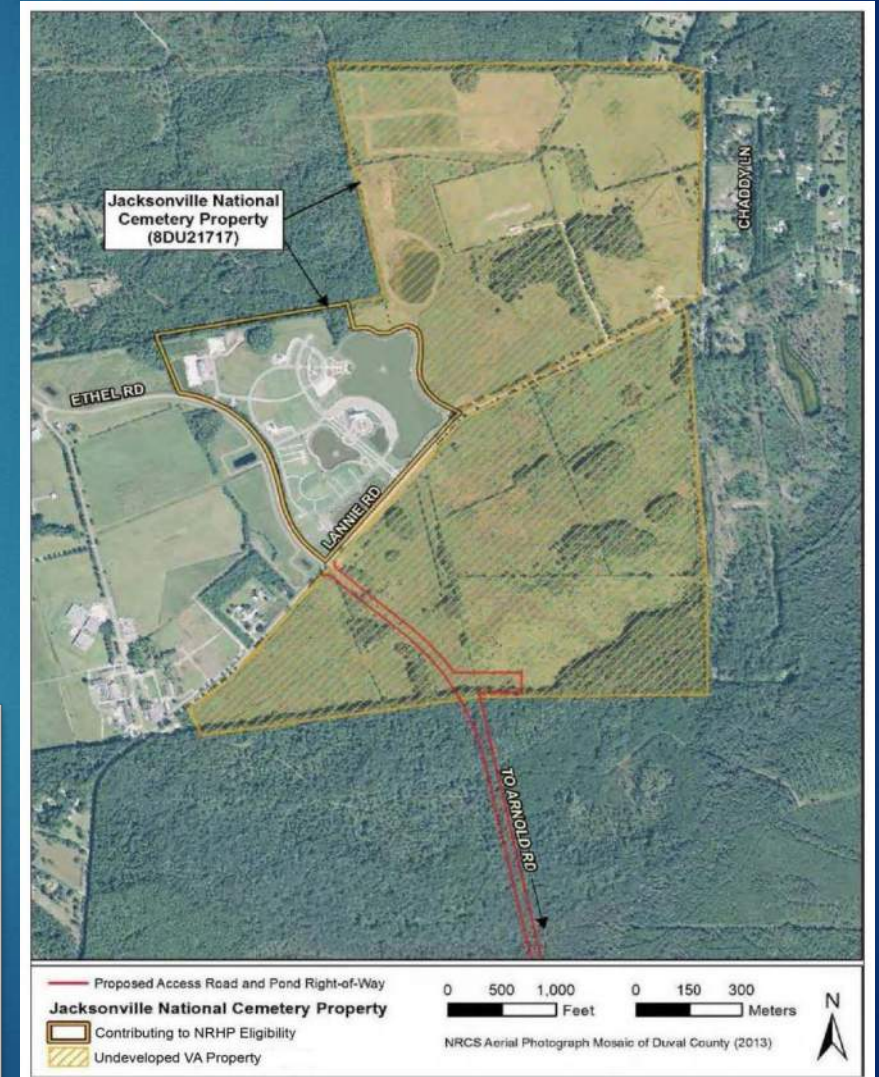
**PUBLIC HEARING TYPICALLY  
REQUIRED**



**OEM APPROVAL**

# Environmental Assessment (EA)

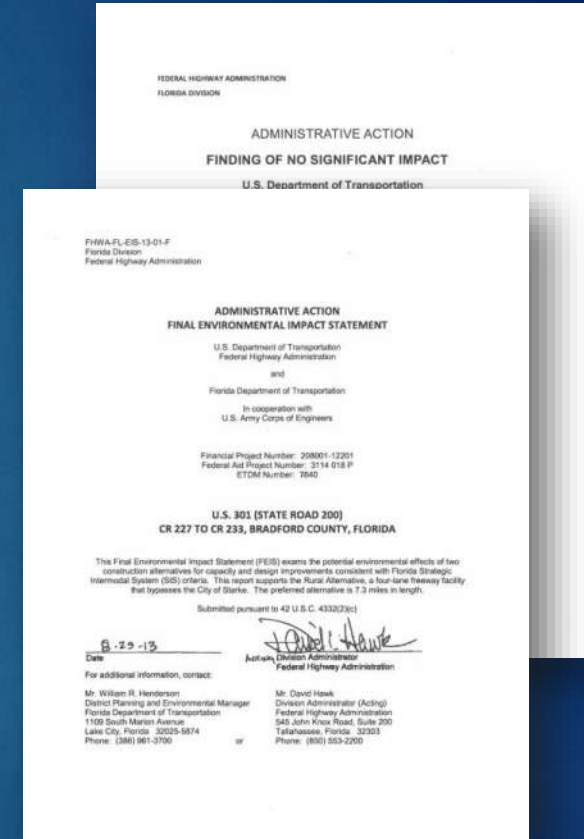
- ▶ Mid-sized projects in scope and size
- ▶ Unknown environmental impact significance
- ▶ EA Completed in one of two ways
  - ▶ Finding of No Significant Impact (FONSI)
  - ▶ Environmental Impact Statement





# Environmental Impact Statement (EIS)

- ▶ Projects with known significant environmental impacts
- ▶ Notice of Intent (NOI)
- ▶ Public hearing required
- ▶ Draft EIS, Final EIS and Record of Decision (ROD)
- ▶ LDCA received once ROD is approved



# Class of Action - State

- ▶ Non-Major State Actions (NMSAs)
  - ▶ Minor projects with minimum to no environmental impacts
  - ▶ Minimal Public Involvement
  - ▶ Approved by District







# Project Description, Purpose and Need

- ▶ Project Description
  - ▶ Includes existing conditions
  - ▶ Project limits, logical termini, and location
  - ▶ Proposed improvements
- ▶ Purpose
  - ▶ Identifies primary goals
  - ▶ Guide alternatives
  - ▶ Should be neither broad nor narrow
- ▶ Need
  - ▶ Deficiencies, issues, and concerns
  - ▶ Examples; Capacity, Transportation Demand, Safety etc.

## 1.0 SUMMARY OF PROJECT

This preliminary engineering report contains detailed engineering information that fulfills the purpose and need for the improvements to the 295 East Express Phase I project from State Route (SR) 98 to SR 202 (J. Turner Butler Boulevard [JTB Blvd.]) in Duval County, Florida. The preliminary engineering report includes existing conditions, alternatives considered, and recommendations for the 295 East Express Phase I project.

### 1.1 Project Description

Interstate-295 (I-295) is a 60.9 mile beltway located in Duval County, Florida, and is part of the Interstate Highway System and Florida's Strategic Intermodal System. I-295 serves the major north-south traffic movement around the Jacksonville urban area, provides intermodal connections to the Port of Jacksonville, Jacksonville International Airport, Norfolk Southern and CSX Intermodal Centers, and connects Interstate 10 with Interstate 95.

This project includes the portion of I-295 East (located in southeast Duval County) from SR 98 to SR 202 (JTB Blvd.) and is approximately 5 miles in length. Currently, there are four through lanes on I-295 between the SR 98 Interchange and the SR 152 (Baymeadows Road) Interchange, and six through lanes between SR 152 (Baymeadows Road) Interchange and the SR 202 (JTB Blvd.) Interchange. See Figure 1-1 for project location map.

### 1.2 Purpose & Need

The purpose of the project is to add capacity, improve travel time reliability, provide long-term mobility options, and improve operations on the I-295 corridor from SR 98 to SR 202 (JTB

Blvd.) currently experiences heavy and speed limits due to demand that vice (LOS) F from SR 98 to SR 152 (Baymeadows Road) to SR 202 (JTB Blvd.). By will operate at LOS F (See Table 1-1).

#### Existing Typical



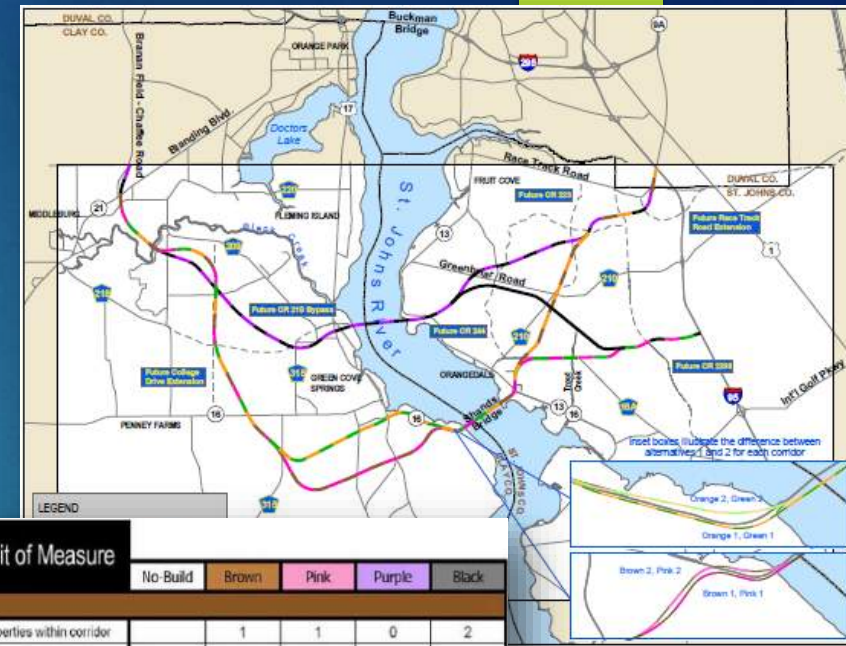
#### Proposed Typical





# Alternative Analysis

- ▶ Alternative Analysis
  - ▶ Developing, evaluating, and eliminating potential alternatives
  - ▶ Interagency coordination
  - ▶ Solicits input from the public and stakeholders.
  
- ▶ Alternatives to be considered
  - ▶ No-Build Alternative
  - ▶ Transportation Systems Management and Operations (TSM&O) Alternative
  - ▶ Build Alternatives



Criteria	Unit of Measure	Unit of Measure				
		No-Build	Brown	Pink	Purple	Black
Social						
Potential Section 4(f) Properties	# properties within corridor		1	1	0	2
Right-of-way						
Total Parcels	# within corridor		156	161	253	275
Total Relocations	# within corridor		31	39	134	134
Residential Relocations	# within corridor		27	35	99	99
Businesses Relocations	# within corridor		4	4	35	35
Natural						
Conservation Lands	# of acres within corridor		12.2	12.2	0	0
Wetlands	# acres within corridor		265.5	402.5	210.6	410.6
Eagle's Nest	# within 1500' of corridor		1	1	2	2
Physical						
Floodplains	# acres within corridor		619.5	644.0	383.4	579.1
Transportation Function						
Network Performance	Study area volume/capacity	.700	.668	.666	.663	.654
Corridor Length	# of miles	-NA-	31.3	31.1	23.5	33.5
Corridor Volume Across S.J. River	2025 AADT	-NA-	59,500	58,000	80,500	95,500
Corridor LOS 2025	A,B,C,D,E, or F	-NA-	B	B	C	C/B
Cost of Traffic Congestion (Cost of delay in lost time and additional fuel consumed)	\$ millions	\$ 3,071.1	\$ 2,090.1	\$ 2,093.8	\$ 2,078.3	\$ 1,994.4
Costs						
Construction	\$ millions		888.2	925.8	781.3	1076.7
Design	\$ millions		88.8	92.5	78.1	107.7
CEI	\$ millions		133.3	138.7	117.1	161.4
Total Engineering/Construction	\$ millions		1110.3	1157.0	976.5	1345.8
Right-of-way	\$ millions		224.9	230.2	267.7	294.6
Mitigation (\$90,000 per impacted acre)	\$ millions		26.6	35.2	18.9	36.9
Total Cost *	\$ millions		1,361.8	1,423.4	1,263.3	1,677.5
Consistency with Plans						
River Crossing Consistent with Clay County Comprehensive Plan			yes	yes	no	no
River Crossing Consistent with St. Johns County Comprehensive Plan			yes	yes	no	no

# No-Build Alternative

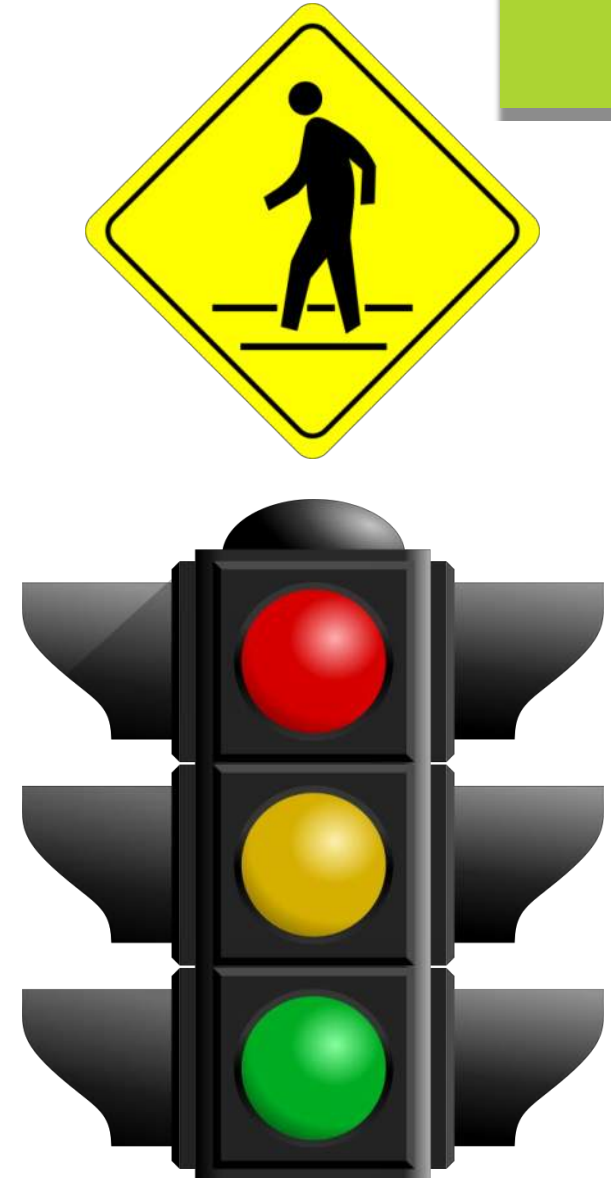
- ▶ The No-Build Alternative or “Do Nothing”
- ▶ Baseline Alternative
- ▶ Requires full analysis
- ▶ Included in the Preliminary Engineering Report (PER) and Environmental Document
- ▶ Shall be under consideration throughout the PD&E Study





# Transportation Systems Management & Operations Alternative (TSM&O)

- ▶ Improvement strategies minimizing almost all environmental impacts
- ▶ upgrades to the existing facilities
- ▶ Must demonstrate that will not meet the purpose and need
- ▶ Required documentation in the Preliminary Engineering Report (PER)



# Build Alternatives

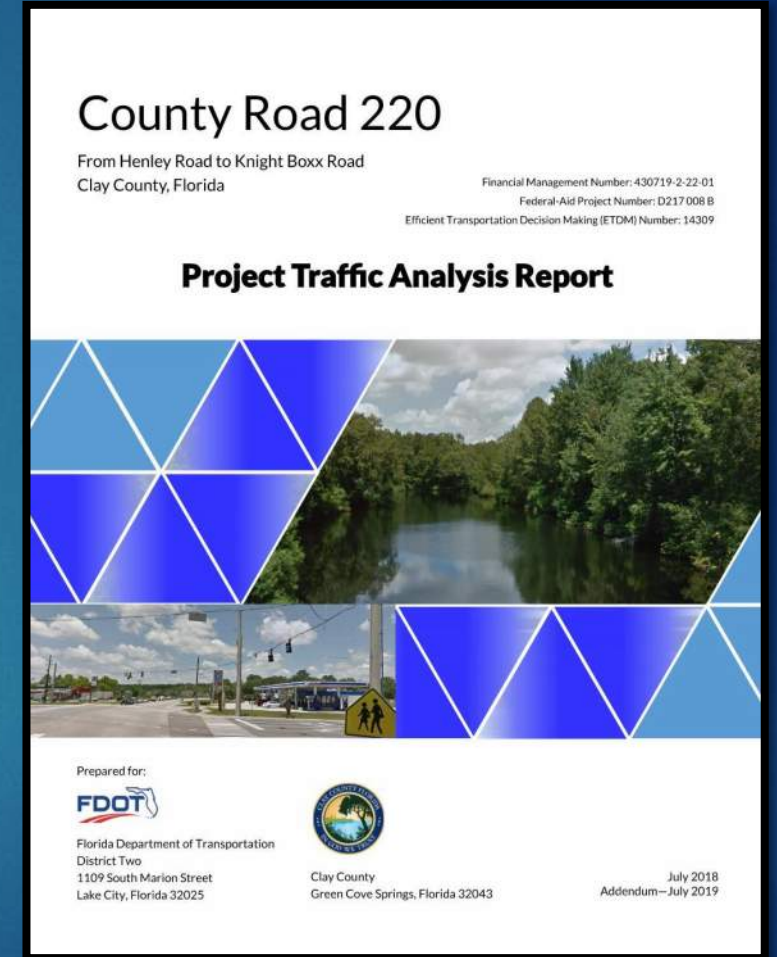
- ▶ Address the projects Purpose and Need
- ▶ Address the transportation problem, avoid/minimize environmental impacts
- ▶ Multiple Build Alternatives analyzed
- ▶ Elimination of Alternatives and The Preferred Alternative
- ▶ Documented in the Preliminary Engineering Report (PER)





# Project Traffic Analysis Report (PTAR)

- ▶ Traffic Analysis
  - ▶ Follows the purpose and need
  - ▶ Identify performance problems
- ▶ Traffic Analysis for PD&E Studies
  - ▶ Methods of Effectiveness (MOE)
  - ▶ Project Traffic Forecasting
  - ▶ Perform traffic operational analysis and safety analysis
  - ▶ Document analysis in PTAR
- ▶ For PD&E Studies involving the Interstate, IARs take the place of a PTAR



# Preliminary Engineering Report (PER)

- ▶ Required for Type 2 CE, EA, EIS
- ▶ Engineering Analysis
  - ▶ Size depends on COA
  - ▶ Data Collection
  - ▶ Design controls and criteria
  - ▶ Existing conditions analysis
  - ▶ Development of alternatives
  - ▶ Selection of the preferred alternative
- ▶ Includes Public Involvement
- ▶ Must be signed by a registered Professional Engineer

I-95 EXPRESS LANES (JTB TO ATLANTIC BOULEVARD)  
PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E)  
STUDY

## Preliminary Engineering Report

I-95 from J. Turner Butler Boulevard to Atlantic Boulevard  
Jacksonville, Duval County, Florida

Financial Project ID No. 432259-2-22-01  
Federal Aid Project No. 0955 308 I

October 2018



Prepared by RS&H, Inc. at the direction of  
the Florida Department of Transportation, District 2

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being or have been carried out by FDOT pursuant to 23 U.S.C. §327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.





# Public Involvement - PIP

Public Involvement Plan I-95 Express Lanes (JTB to Atlantic)  
Project Development & Environment PD&E Study

**FDOT**

**PUBLIC INVOLVEMENT PLAN**

**I-95 Express Lanes (JTB to Atlantic Blvd.)  
Duval County, Florida  
Financial Project Number 4322592-22-01**

In accordance with Part 1, Chapter 11 of the "Project Development and Environment Manual" (PD&E Manual) this Public Involvement Plan is submitted to the District Environmental Management Office for review and approval.

Submitted by:  Date: 11/06/2018  
RS&H Project Manager

Approved by:  Date: 11/06/2018  
FDOT Project Manager

**FDOT** Florida Department of Transportation  
District 2

1



# Public Involvement - Meetings

## ▶ Three Types of Meetings

- ▶ Public Kickoff Meeting
- ▶ Alternatives Public Meeting
- ▶ Public Hearing

## ▶ Public Meetings

- ▶ Provide opportunity to engage public and inform them about status of project

## ▶ Public Hearing

- ▶ Gives public the chance to voice opinions and concerns about the project
- ▶ Depending on project scope, may be required by law





# Public Involvement

Two-Way communication  
(Who are you and what do  
you think?)



One-way  
communication  
(Here's what you need  
to know)



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Planning

PD&E

Design

Construction







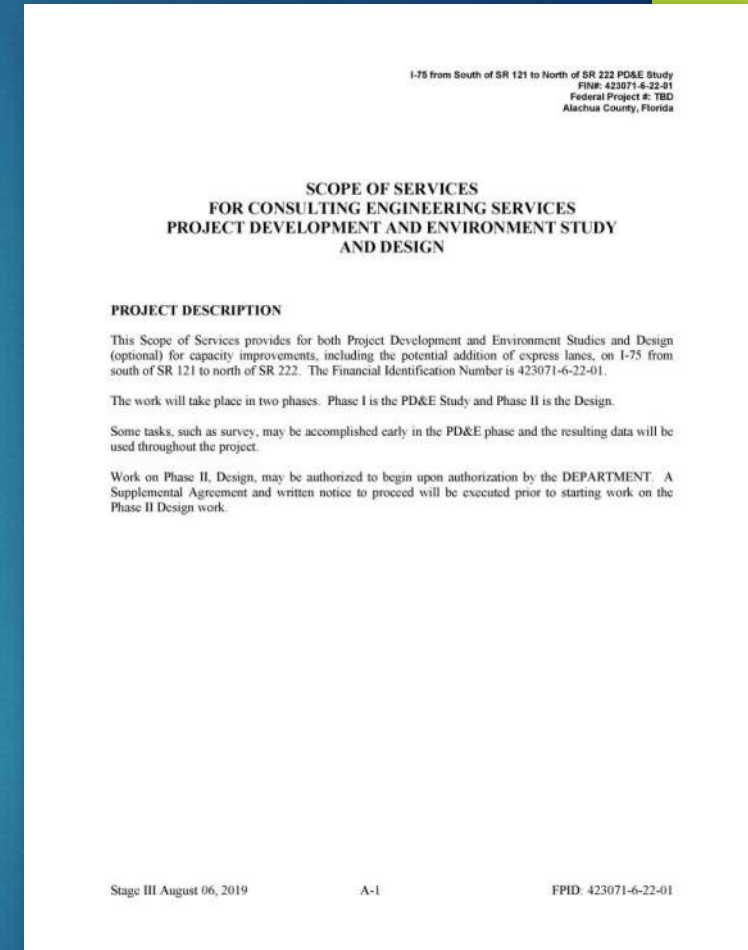
# Contract Types

- ▶ Project Specific
  - ▶ Single and Goes with project contracts
  - ▶ Defined project limits
  - ▶ Advertised
  - ▶ Defined Scope of Services
- ▶ Districtwide and Continuing Services
  - ▶ Broad area coverage
  - ▶ Wide ranging scope
  - ▶ Used to provide concepts and support additional projects.



# PD&E Scope

- ▶ Project Scoping
  - ▶ Identifies various project related issues
  - ▶ Determines potential work activities
- ▶ Builds on the SWAT process
  - ▶ Scoping starts towards the end of Planning and ends with the beginning of Design
- ▶ Documents the level of analysis to meet the Purpose and Need





# PD&E Schedule

- ▶ Critical Elements of the PDE Schedule
  - ▶ PD&E or Design level survey (whichever appropriate)
  - ▶ Alternative analysis
  - ▶ Typical Section Selection
  - ▶ Engineering Analysis
  - ▶ Right-of-Way identification
  - ▶ Utility Impacts
  - ▶ Environmental impact analysis
  - ▶ Public Involvement Activities
  - ▶ Final documentation and Approval with LDCA
- ▶ Typical PD&E schedule length 1 to 2 years
- ▶ Many parts of the PD&E can be apart of the SWAT process



# Typical District 2 PD&E Projects

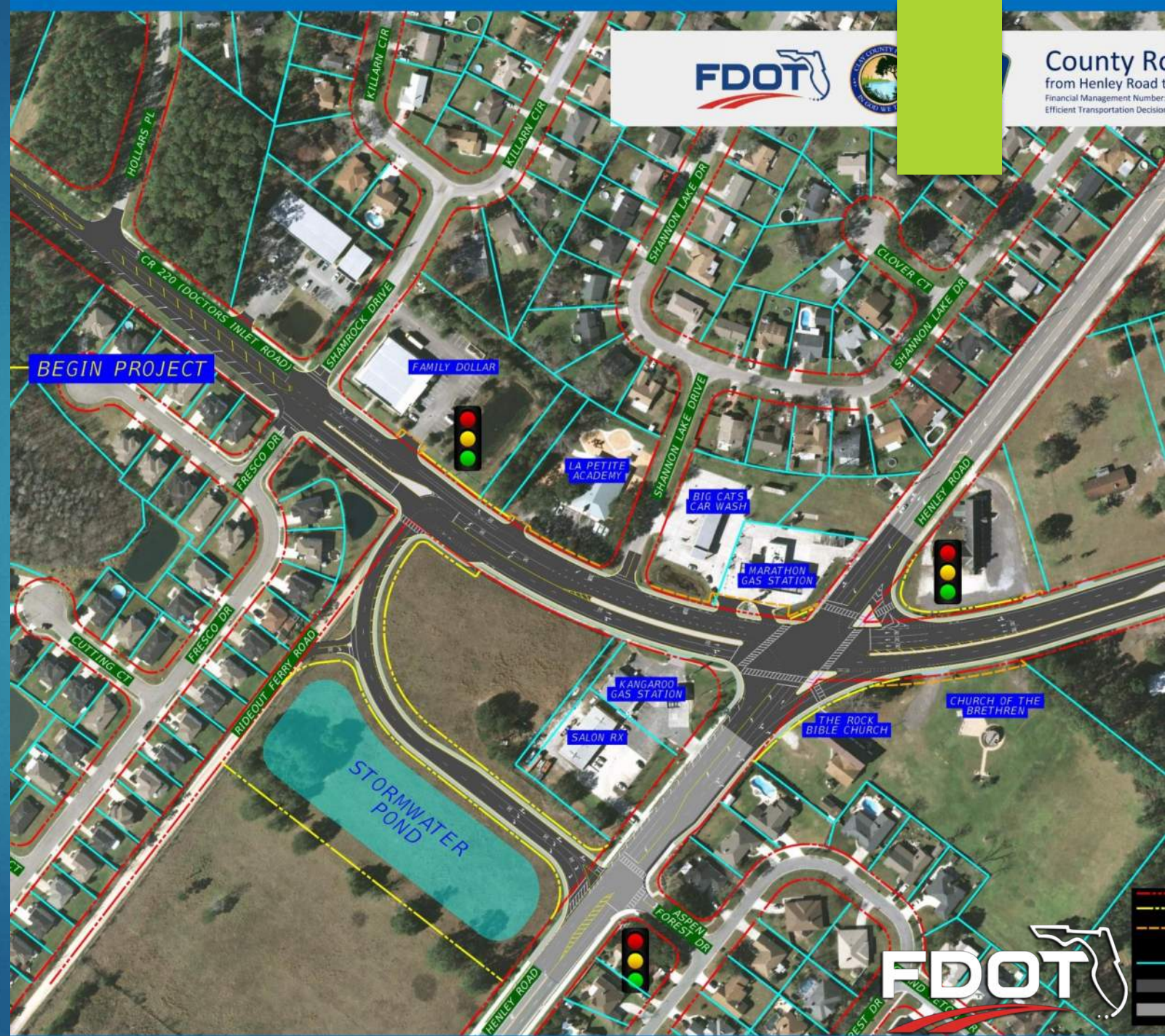
- ▶ Type 1 CE
- ▶ Smaller in scale and impact
- ▶ No relocations, minor or no Right-of-Way
- ▶ District approved, no LDCA given
- ▶ Majority bridge replacement projects





# Typical District 2 PD&E Projects

- ▶ Type 2 CE
- ▶ Roadway widening/reconstructions
- ▶ No significant environmental or Right-of-Way impacts
- ▶ LDCA given by OEM







Questions?

# District 2 Contact

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*Project Development Manager*

FDOT District Two

Planning and Environmental Management Office

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